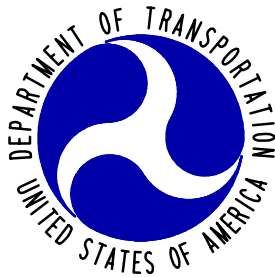


REQUEST FOR QUOTATIONS

FORM LINERS

DTFH68-03-RFQ-00162



**FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS
555 ZANG STREET (HFAC-16)
LAKEWOOD, COLORADO 80228**



U.S. Department
of Transportation
**Federal Highway
Administration**

**Central Federal Lands Highway Division
555 Zang Street, Mail Room 259
Lakewood, Colorado 80228**

July 1, 2003

In Reply Refer To:
HFAC-16

To: Firms Intending to Provide a Quote

Subject: Request for Quotations, Form Liner

Attached is Request For Quotations (RFQ) No. DTFH68-03-RFQ-00162. In order to evaluate your quote as promptly and accurately as possible, it is very important that documents be submitted in a timely manner to the Contracting Office and be completed in accordance with the following instructions.

The following documents must be submitted with your quote as follows:

➤ **Solicitation Provision 52.212-3 Offeror Representations and Certifications-Commercial Items**

Complete all applicable blanks in this Provision and submit with your quote.

➤ **Review the Evaluation Criteria and Provide Information Requested under Qualifications, Experience, and Past Performance.**

Firms quoting on this solicitation are responsible for submitting quotations, and any modifications or revisions, so as to reach this office by the date and time specified below.

To provide for easy identification and proper handling of your quote, mark the lower left corner of the envelope containing your quote with the following information:

RFQ Number (**DTFH68-03-RFQ-00162**);
Date and Time for Receipt of Quotes (**July 11, 2003 – 3:30 PM Denver Local Time**); and
ATTN: **Contracting Office**.

If there are questions regarding this RFQ, please fax them to (303) 969-5971, attention Kathy Mooney.

STATEMENT OF WORK

For purposes of responding to this Request for Quotations, the Contractor is required to provide Qualifications, Experience, Past Performance Information, and Price to develop drawings and a mockup form liner, in accordance with this scope of work. The contract awarded as a result of this Request for Quotations will consist of Items (1) Preliminary Shop Drawings, (2) Final Drawings, and (3) Mockup Form Liners contained in the statement of work. All work must be completed within 90 calendar days.

Qualifications, Experience, and Past Performance

The Contractor shall have a minimum of five (5) consecutive years work experience making custom form liners to create formed concrete surfaces to match natural stone shapes and surface textures.

Submit a list of three (3) recently completed installations (no more than five (5) years from present) that represent custom form liner development for a specialized project using simulated natural stonewalls with textured vertical surfaces. Include the project name and location; project budget for the simulated natural stone portion of the textured concrete work performed by the Concrete Installer; and address and phone number of the owner or owner's representative with knowledge of the work performed. This information will be used to evaluate past performance and the Contractor's understanding of the technical requirements of the Statement of Work.

Submit a minimum of three recent 8- by 10-inch (8" X 10") color photographs of each installation stated above as evidence of the experience and ability to produce textured vertical surfaces with the use of form liners. The photographs are to be taken at various distances (10 feet, 20 feet, and 50 feet) from the textured vertical surfaces to distinguish details and overall quality of the work. The photographs will be used to evaluate the aesthetic appearance of the walls.

Provide a work plan and a proposed schedule for completing the work (Items 1, 2, and 3) within the required time. This information will be used to evaluate the Contractor's understanding of the technical requirements of the Statement of Work.

Description of the Work

This work consists of creating a textured form liner for a special surface texture. The design will be such that it replicates the existing dry stack walls in the town of Georgetown, Colorado. The form liner will emulate the size, shape, texture, stone spacing, and chinking and overall appearance of these existing walls. The form liner will be used on face wire-faced Mechanically Stabilized Earth (MSE) and cast-in-place type retaining walls.

The chosen form liner pattern will be used as the standard MSE wall facing for a 22-mile roadway in Colorado. It is estimated that 5 to 7 miles of the road will require the MSE wall to be faced with the form liner. Form liner wall heights will range between 4 feet and 22 feet throughout the proposed MSE wall corridor.

Form Liner Requirements

The form liner panels shall simulate the natural stone masonry and texture of the existing dry stack retaining walls located in Georgetown, Colorado.

The form liner panels shall provide a variety of sizes of the natural stones as well as variance in the spacing of the stones. Exercise care to eliminate nesting or bunching of similar sized stones. This requires the smallest stone size to fall between the following ranges: 1 foot 6 inches by 1 foot 0 inches (1' 6" X 1' 0") or 1 foot 0 inches by 2 feet 0 inches (1' 0" X 2' 0"). Any stone below the smallest stone size listed above will be considered a chinking stone.

Chinking stones will not be more than 7% of the total pattern.

Stones with unique and visually identifying character that become apparent when reused in a wall panel or easily identifiable will not be allowed.

The individual stones in the form liner pattern shall have angular edges to maintain a realistic look of talus type stone, and have a variety of surface relief consisting of but not all inclusive to smoothness, roughness, dimples, cracks, undulations, etc. Stones of maximum or minimum bulge shall not be bunched together, but shall be randomly placed throughout the retaining wall. The bulge of individual stones shall be irregular to provide a variety in the texture of the entire surface. Generally, the smallest jointing depth will be ½ inch to 2 ½ inches and width will be ¼ inch to 2 inches. Any joints wider than 2 inches will require a chinking stone.

The form liner joint relief should vary; should not be uniform. The jointing plan of the individual stones will vary throughout the total patterning to give a variety of relief in the overall appearance of the natural stone pattern.

Form liner panels will abut to each other in the joint regions of the stone pattern when configuring the form liner panel layout. No noticeable abutting lines, or pattern created by abutting lines, will be visually apparent on the finished wall.

All construction expansion and control joints will occur in the recess joint regions of the stone pattern with careful design of long horizontal stone lengths being avoided. The arrangement of the form liner panels will provide a continuous stone pattern without visual disruption or repetition within 62 feet horizontally. Vertically the appearance of the stone pattern is to have a maximum amount of variety and no two liners can be connected to each other. No liners of like kind will be placed adjacent to each other.

Drawings and Submittals

Approval of custom designed, natural stone, special surface texture (form liner) will be as follows:

(1) Preliminary Shop Drawings. The Contractor shall submit five (5) sets of preliminary shop drawings to the COTR for review. The preliminary shop drawings will be of simulated dry stacked stone pattern form liner panels based on the specifications stated in the scope of work. Provide preliminary shop drawings on 24- by 36-inch (24" X 36") sheets. Reduced-size drawings will be required as necessary.

The preliminary shop drawings will include but not be limited to the following:

- Plan view, elevation view, and details showing overall patterns of natural talus stones in the form liner.
- Individual form liner panel designs, patterns and gang panel layouts.
- Stone pattern descriptions, dimensions and sequencing of form liner sections.
- Representative drawings of form liner panel layouts for the retaining walls. Representative drawings shall show: the retaining wall traffic face and actual height; the retaining wall backside; and the height of the tallest wall, showing stepped footings.
- The arrangement of form liner panels that provides a continuous stone pattern without visual disruption or repetition. On the drawings, show representative views of completed form lined walls with each form liner panel outlined in a dark line, and completed form lined walls without each form liner panel outlined. Critical features include but are not limited to irregularities in stone patterns such as rock clusters, rosettes, linear rocks, and mortar joints.
- Details showing typical cross sections of walls, joints, corners, step footings, stone bulge, stone size, working line, joint and bed depths, joint locations, and end, edge and other special conditions.

Allow the COTR three (3) weeks of review time per shop drawing submittal. After each review of preliminary shop drawings, comments will be returned to the Contractor so the necessary changes can be made. If drawings are returned for revision, correct and resubmit for approval. Reviews will continue until the COTR approves the preliminary shop drawings.

(2) Final Drawings. Following approval of the preliminary shop drawings, the Contractor shall submit five (5) sets of final drawings to the COTR for approval. For all concrete surfaces receiving special surface texture (form liner), provide the types, quantities, widths, and lengths of form liner panels required for the job. Show the location and spacing of joints.

Provide final drawings of all form liner patterns and gang panel layouts to the COTR for approval prior to form liner development.

(3) Mockup Form Liners. The Contractor shall fabricate one (1) mockup form liner for each panel approved in the final set of drawings. During mockup form liner development, a representative from the Federal Highway Administration (FHWA) shall be present. The approximate size of the mockup is 10 feet by 12 feet (10' X 12').

The FHWA representative shall be present as all fabricating of mockup form liner panels are prepared, and will inspect them at the manufacturer's fabrication site, prior to casting final molds. During the inspection of the mockup form liner panels, the Contractor will be prepared to make adjustments to the form liner pattern where imperfections are found by the FHWA representative. If initial mockup panel(s) is found to be unsatisfactory, the Contractor will be required to construct additional mockup panel(s). Additional reviews and inspections of the mockup form liner panels will be repeated until approved by COTR.

During the inspection of the mockup form liners, the following items will be considered critical for approval: individual stone spacing, sizes and shapes; stone surface texture; stone bulge; stone patterning; joint size, width and depth. This list of items is not all inclusive and additional items may be added as necessary. Demonstrate all special applications of the form liner (joints, corners, step footings, etc.) that will be necessary during construction.

(4) Master Form Liner Panels. The master form liner panels for the **future construction project** shall be fabricated based on approved final drawings and mockup form liners. The Contractor shall construct master form liner panels from approved mockup panels.

All questions regarding the solicitation shall be submitted in writing to Ms. Kathy Mooney at FAX # (303) 969-5971.

The following photos are available electronically in .jpg format at website:
www.cflhd.gov/procurement under tab “Current Solicitations” titled Form Liners

Photo A



Photo A is an example of a dry stacked wall taken in Georgetown, Colorado.

Photo B



Photo B is a picture of the same dry stacked wall. The crosshatched area above shows types of rocks and rock groupings that should not be reproduced in the form liner pattern layouts. These rock shapes and grouping delineated above are too distinct and eye catching and will allow an individual a way to pick out the repeating pattern of the form liner.